

1 1. A method comprising:
2 forming a trench around an electrical component;
3 filling said trench with a conductive material;
4 and
5 forming an interconnection layer coupled to said
6 conductive material.

1 2. The method of claim 1 including forming said
2 trench between said interconnection layer and a
3 semiconductor structure.

1 3. The method of claim 1 including forming said
2 trench between a pair of interconnection layers.

1 4. The method of claim 3 including forming a first
2 trench between a first pair of interconnection layers and a
3 second trench between a second pair of interconnection
4 layers and positioning a passive circuit element between
5 said trenches.

1 5. The method of claim 1 including grounding said
2 material.

1 6. The method of claim 1 including positioning a
2 passive circuit element within an enclosure formed by said
3 material and layer.

1 7. The method of claim 6 including forming an
2 opening in said material to allow an electrical connection
3 to said passive circuit element.

1 8. The method of claim 6 including connecting said
2 passive circuit element to other devices through a buried
3 contact.

1 9. The method of claim 1 including electrically
2 coupling said material and said interconnection layer.

1 10. The method of claim 6 including forming a flat
2 spiral inductor to act as said passive circuit element over
3 said semiconductor structure.

1 11. The method of claim 10 including forming a
2 resistor and capacitor.

1 12. The method of claim 1 including forming said
2 material over a guard ring.

1 13. An integrated circuit comprising:
2 a semiconductor substrate;
3 an interconnection layer positioned over said
4 substrate;

5 a passive circuit element between said substrate
6 and said interconnection layer; and

7 a trench that encircles said passive circuit
8 element, said trench filled with a conductive material.

1 14. The circuit of claim 13 wherein said trench
2 substantially encircles said passive circuit element.

1 15. The circuit of claim 14 wherein said material
2 includes an opening for an electrical connection to said
3 passive circuit element.

1 16. The circuit of claim 13 wherein said passive
2 circuit element is a flat spiral inductor.

1 17. The circuit of claim 13 including first, second
2 and third interconnection layers, said passive circuit
3 element formed in said second interconnection layer and a
4 pair of metal-filled trenches extending between said first
5 and second interconnection layers and said third and second
6 interconnection layers.

1 18. The circuit of claim 13 wherein said trench
2 extends from said interconnection layer to said substrate.

1 19. The circuit of claim 13 wherein said material is
2 grounded.

1 20. The circuit of claim 13 including a buried
2 contact which couples said passive circuit element under
3 said material.

1 21. The circuit of claim 13 wherein said material and
2 said interconnection layer are electrically coupled.

1 22. A method comprising:
2 forming an integrated passive circuit element;
3 and
4 substantially enclosing said element using a
5 trench filled with a conductive material.

1 23. The method of claim 22 including forming an
2 interconnection layer coupled to said material.

1 24. An integrated circuit comprising:
2 a semiconductor substrate;
3 an active circuit element formed in said
4 substrate;
5 a guard ring encircling said active circuit
6 element formed in said substrate; and

7 a trench filled with a conductive material
8 coupled to said guard ring.

1 25. The circuit of claim 23 wherein said material
2 couples to a guard ring connection layer to bias said guard
3 ring.

1 26. The circuit of claim 24 including a metal one
2 layer over said substrate, said material electrically
3 coupled to said guard ring and said metal one layer.

1 27. The circuit of claim 24 wherein said guard ring
2 completely surrounds said active circuit element.

1 28. The circuit of claim 27 wherein said trench
2 completely surrounds said active circuit element.

1 29. The circuit of claim 24 wherein said active
2 circuit element includes a transistor.

1 30. The circuit of claim 24 wherein said active
2 circuit element is enclosed in a shield over the substrate,
3 said shield formed by said material and an overlying metal
4 layer.